

makeplain™

Multi-Event Optimization

Shameless plug!

Check out my blog

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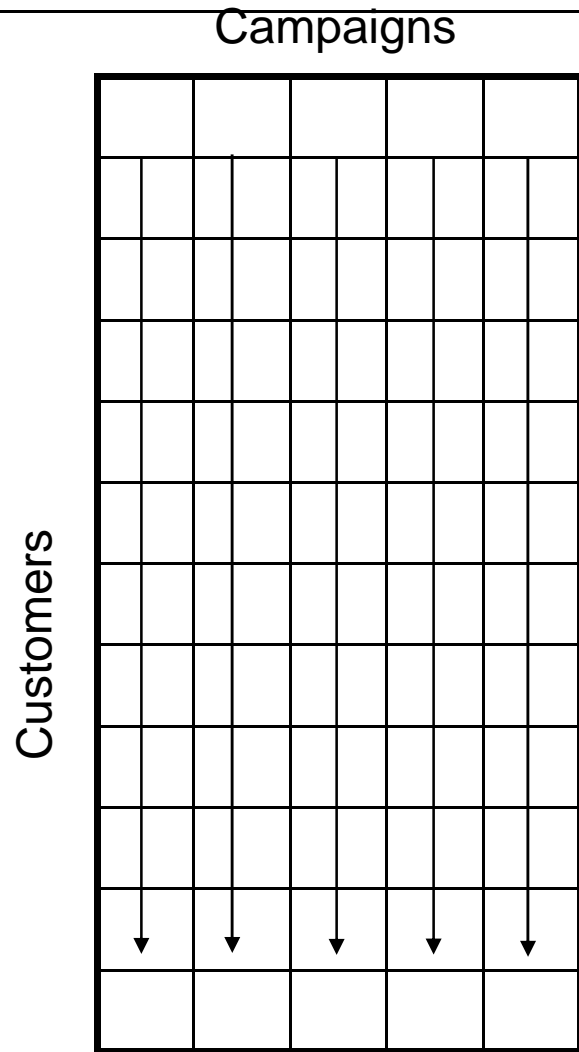
return on intelligence™

- Share our real world experiences
- Reference some real results
- Give you some ideas for action
- Share a couple of statistical “tidbits”

- Leading direct marketers are discovering that traditional analytic techniques select the same core group of customers for every campaign
- Dramatic increases in the number of customer contact enabled by better technology and marketing thought
- Increased campaign complexity driven by the proliferation of channels and strategies
- Direct marketing response rates are decreasing

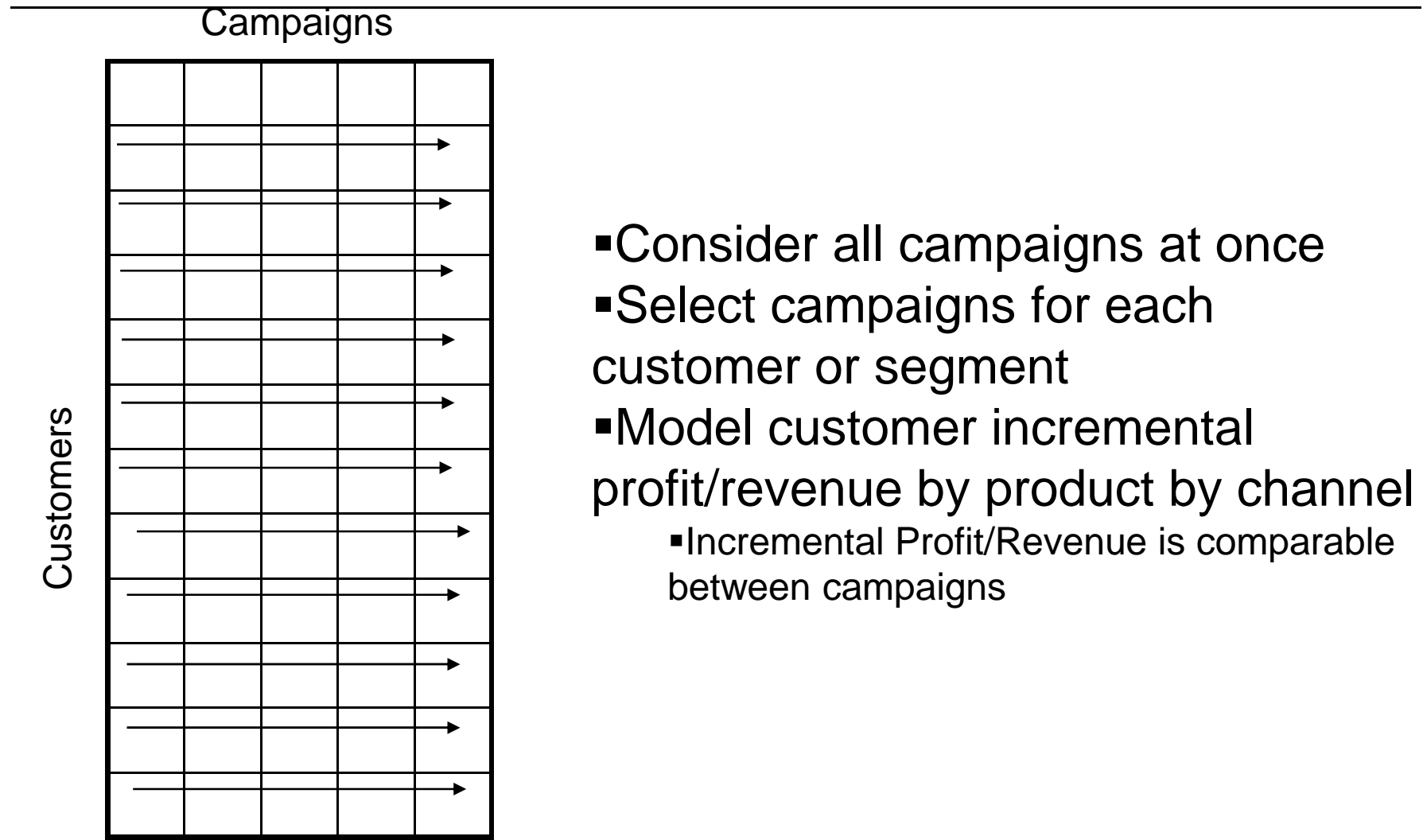
- How to reverse the decline in response rates?
- How not to inundate your best customers?
- How to match right offer, right product, right channel, right time, right customer?
- How to increase marketing effectiveness?

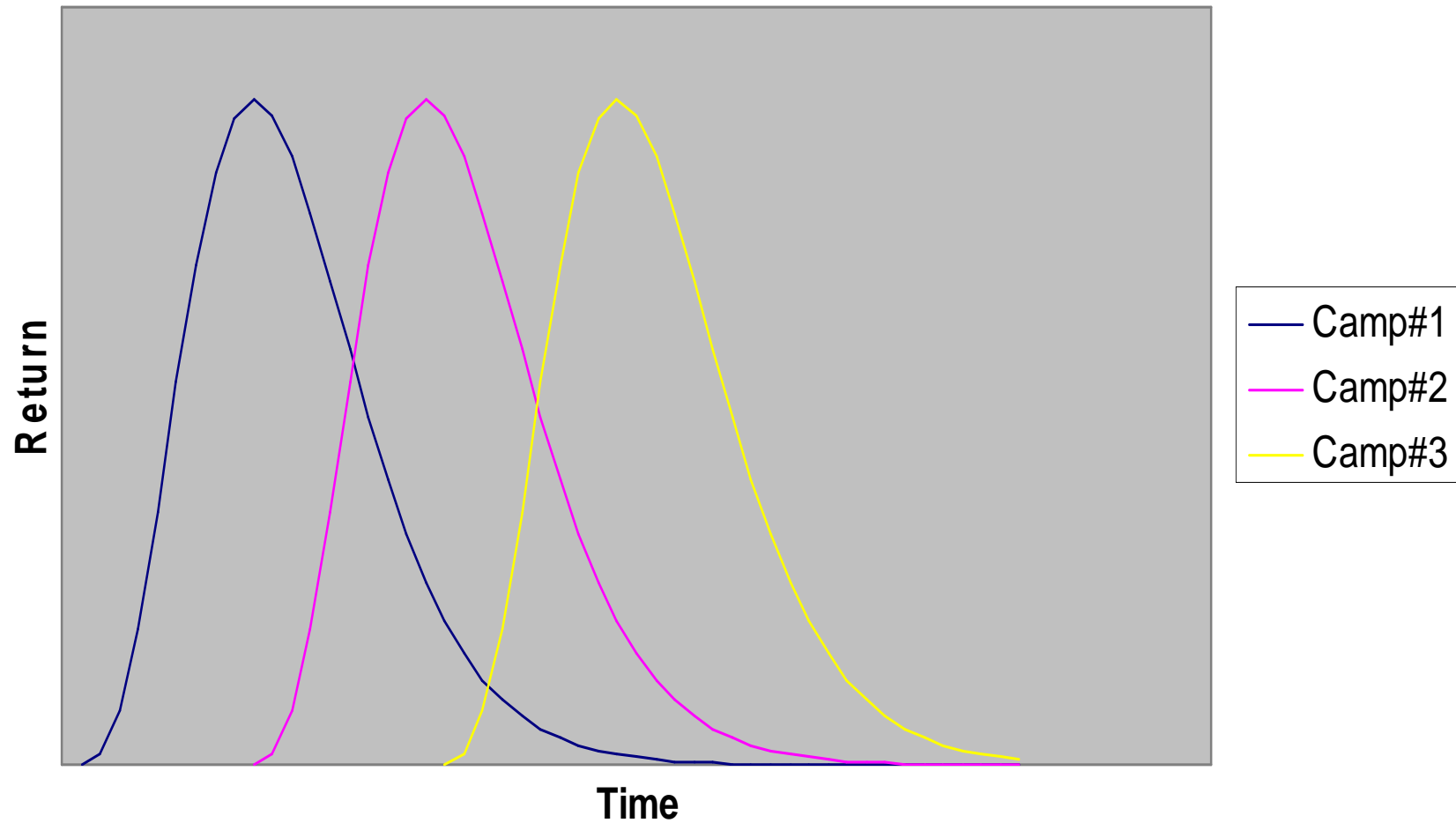
makeplain™ The Current Paradigm



- Each campaign is a silo
- We select customers for each campaign
- We model customer likelihoods and probabilities by product by channel
 - Probabilities are not comparable between campaigns

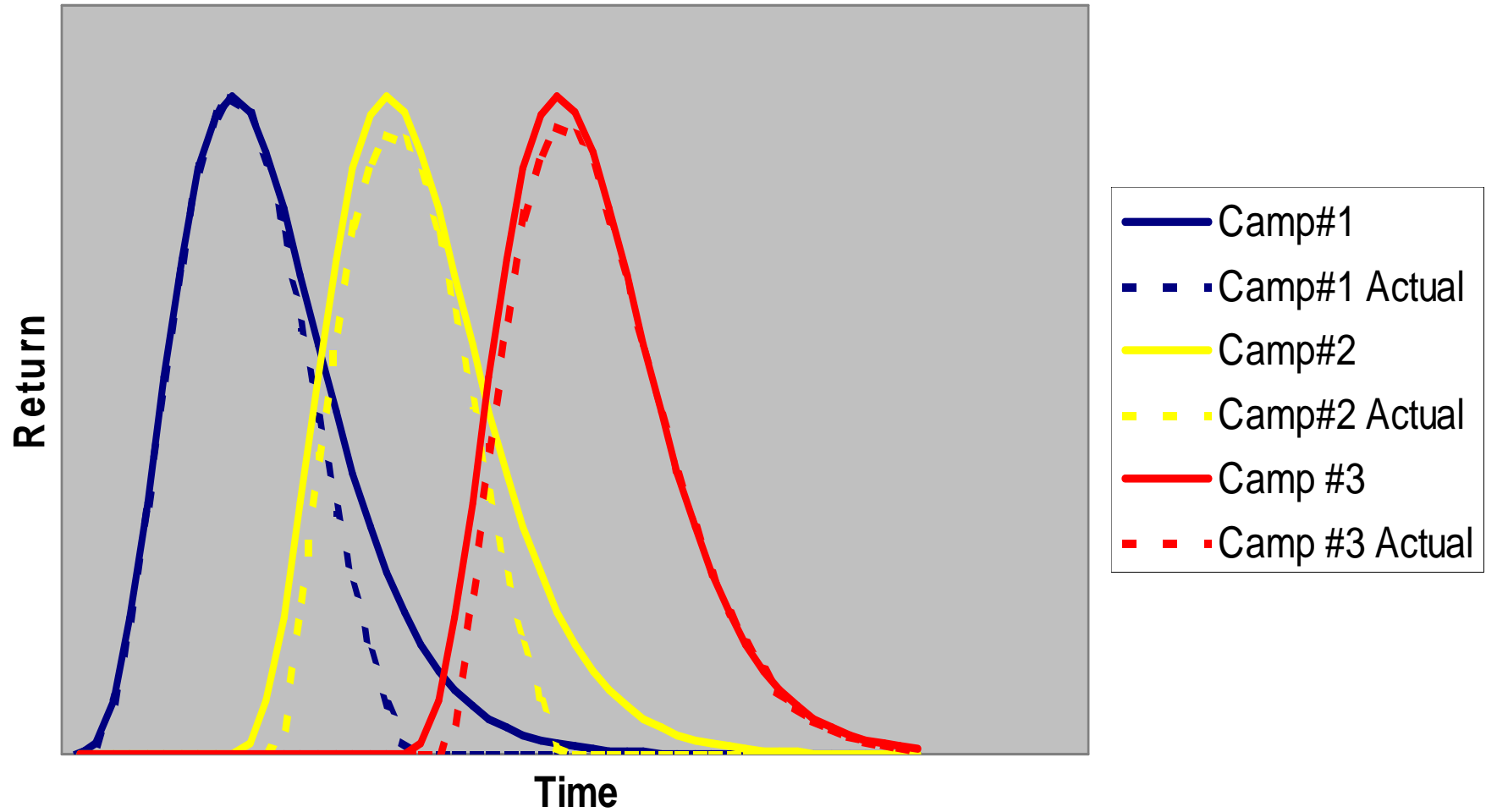
makeplain™ The Proposed New Paradigm



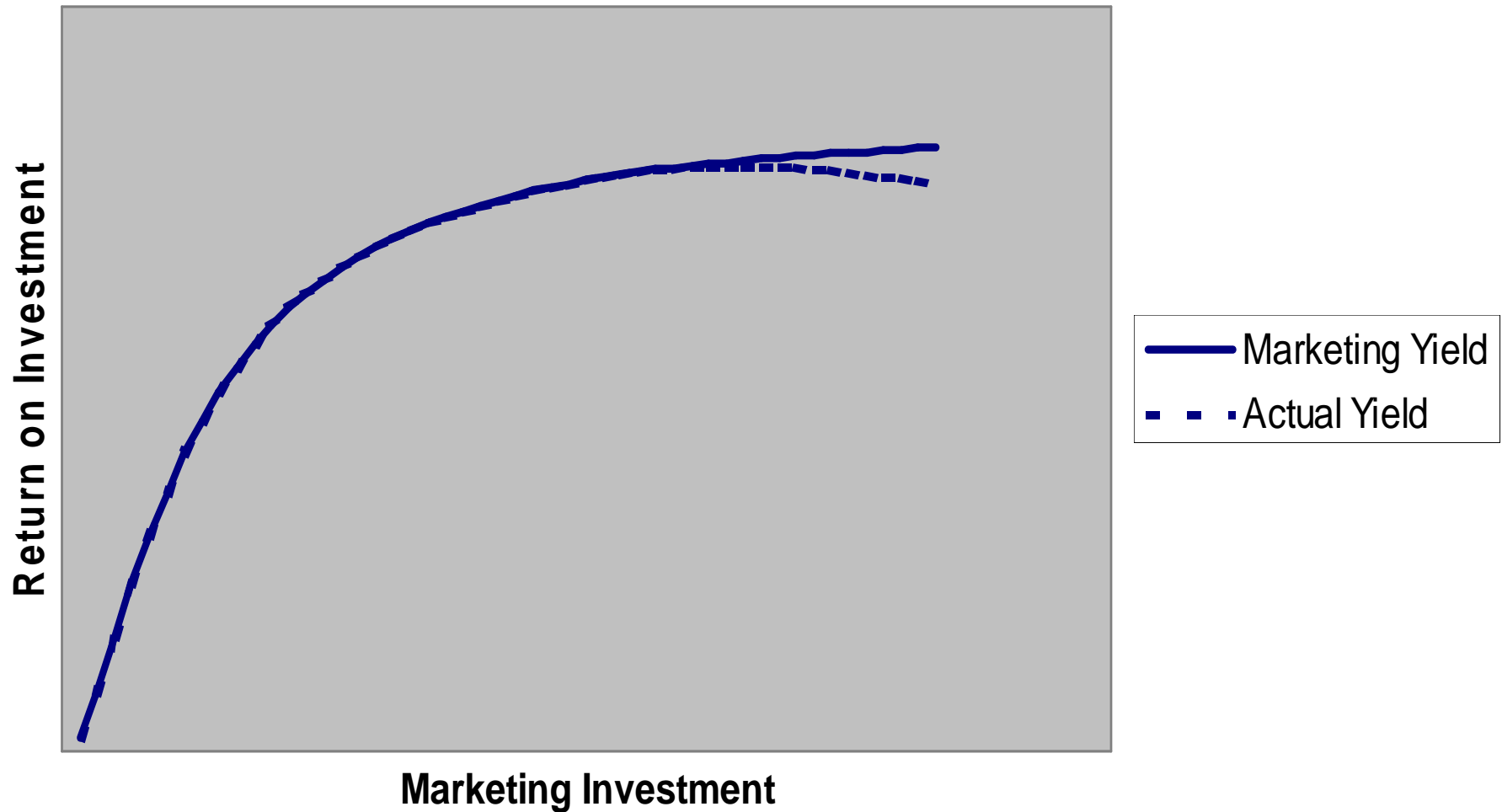


Neighbouring Campaigns Cannibalize Each Other

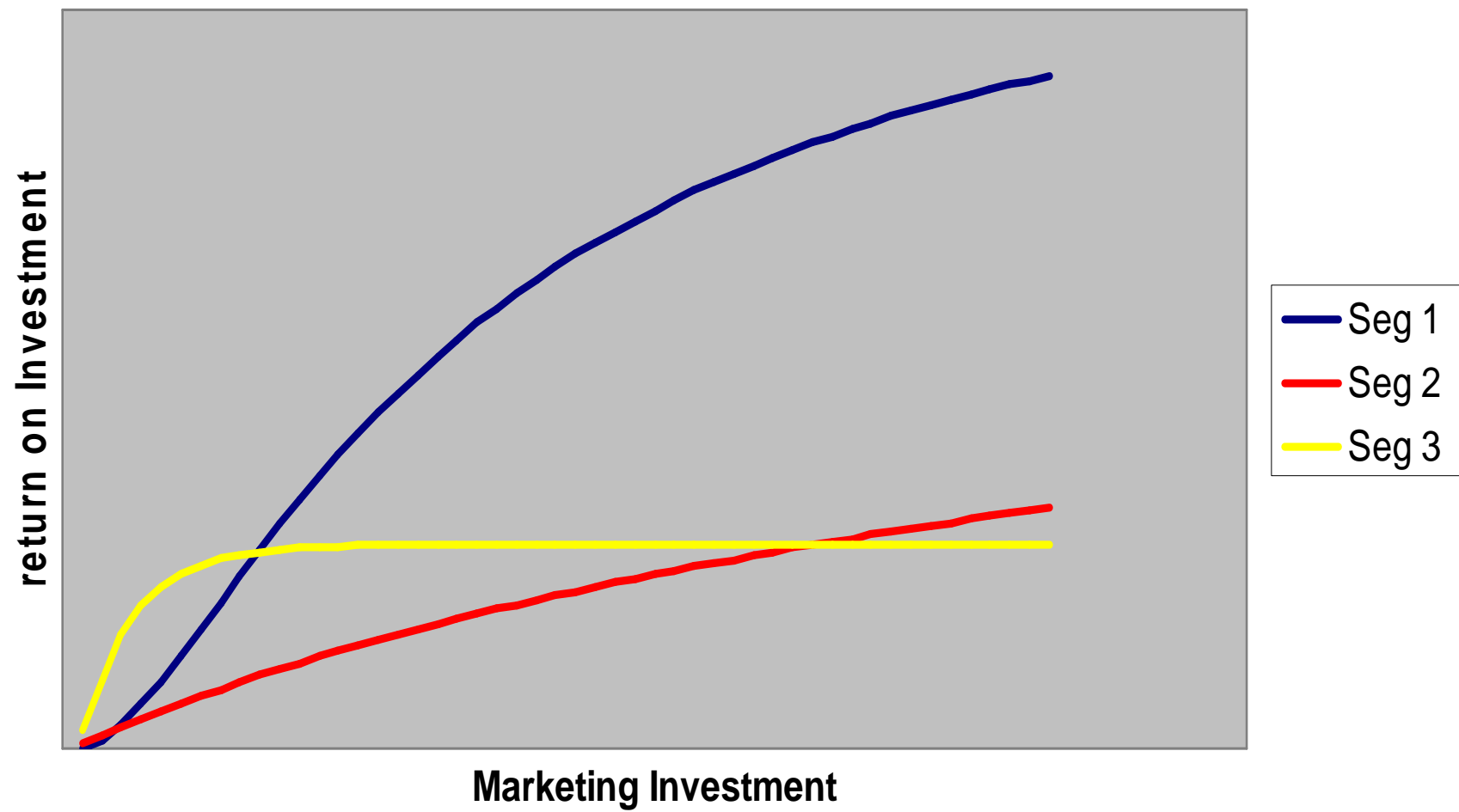
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- Promotions are
 - Similar customer lists
 - Similar in time
 - Similar in product
 - Similar in offer
 - Similar in promotion type
 - Negatively/Positively Correlated or Conflicting/Supporting Contacts
 - negative example - If you send a collections letter to a customer today, how will they view your mortgage solicitation tomorrow
 - positive example - you follow up a direct mail piece with a phone call



makeplain™ Each Customer Segment has its own yield curve



- Optimize over all campaigns
 - Allocate the marketing budget to customer segments to generate the maximum yield
- Minimize the negative interaction between campaigns
 - Model the interaction (incremental profit/revenue)
- Apply constraints
 - Min/Max total marketing budget
 - Min/Max number of contacts per segment
 - Min/Max number of contacts by channel
 - Cost of execution by channel

$$Z = \sum_p (R_p - E_p) y_p - L \sum_{p,p'} R_p S_{pp'} y_p y_{p'}$$

Z = maximized Metric

R_p = Expected Gain for campaign p, by segment and channel

E_p = Cost to execute campaign p, by segment and channel

$S_{pp'}$ = Interaction between campaign p and p' by segment and channel

L = weighting factor to determine importance of interaction terms

Y_p = 1 or 0 depending on whether customer segment received p

$Y_{p'}$ = 1 or 0 depending on whether customer segment received p'

Operations research is a branch of mathematics used extensively in supply chain management, distribution & logistics in manufacturing and retail, yield management in airline/travel

- US Catalogue Retailer
 - 480 million contacts per year
 - Each customer receives 60 contacts per year but spends on average only 2-3 times per year
- Result on a partial test over several campaigns
 - 6% decrease in ad cost
 - 2% increase in profit (\$3.5 Million per year)
 - 21% increase in new customer response rates

- US Direct Marketer
 - 300+ million contacts per year
 - 25 million customers
 - 50/50 Test comparison of "old paradigm" to "new paradigm" for 11 marketing campaigns

- Results
 - 10% reduction in ad cost
 - 11% increase in profitability

- Create a table in your data warehouse or marketing database that contains customer id and model propensity scores for all campaigns a customer is eligible for
- Create an expected financial gain for each campaign response
- Multiply Propensity Score by Expected Gain to get expected incremental gain by customer
- Rank the campaigns for each customer by highest incremental return. Simple optimization over all campaigns.
- Execute only the next best X contacts for each customer. Control the interaction by limiting number of campaigns customer qualifies for
- Update the table of scores and expected gains weekly, monthly or quarterly

- Track marketing performance for each campaign by segment (and customer)
- Create yield curves for each segment taking into account all marketing contact (I.e. track marketing cost at the customer level)
- Allocate budgets to segments using yield curves and optimization
- Use channel costs and constraints to allocate number of contacts by segment
- Execute next best X contacts using new channel and budget constraints

- Build Interaction Terms between campaigns
- Optimize all contacts planned for next 3 to 6 months to create a custom contact plan for each customer segment replacing next X contact approach
- Increase number of segments to get close to one to one “pipe-dream”

makeplain™ Key Success Factors

- Executive Sponsorship and commitment to business metrics
- Data Quality
- Analytic Expertise
- Willingness to change

- If you were given a medical test with 99% accuracy that resulted in a positive diagnosis, how likely would it be that you were actually ill?
- Doctor's quoting statistics in court and causing people to go to be convicted?
- Source: TED.com